UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,023	07/08/2003	Yusuke Fukumoto	43888-260	9495

7590 07/22/2005

MCDERMOTT, WILL & EMERY
600 13th Street, N.W.
WASHINGTON, DC 20005-3096

EXAMINER	
WEINER, LAURA S	
ART UNIT	**PAPER NUMBER**
1745	

DATE MAILED: 07/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/614,023	FUKUMOTO ET AL.	
	Examiner	Art Unit	
	Laura S. Weiner	1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 July 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 2* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 2* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *7-03; 12-04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claim 1 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Sakurai et al. (JP 2000-195518, translation).

Sakurai et al. teaches a nonaqueous electrolyte secondary battery comprising a positive electrode, a nonaqueous electrolyte and a negative electrode comprising a carbon material formed of a mixture of a carbon fiber material (A) and a carbonaceous material (B). Sakurai et al. teaches on page 7 of the translation that Examples 12-13 teach 10% of natural graphite and 90% of carbon fiber having1.6 g/cm3. Sakurai et al. teaches on page 3 of translation that the carbonaceous ingredient is carbon powder having a mean particle diameter of 5-30 um and d002 is 0.3354-0.370 nm. Sakurai et al. teaches on page 2 of the translation that the carbon fiber ingredient has an average fiber length of 10-100 um and aspect ratios (a fiber length/diameter of fiber) of 2-10.

Since Sakurai et al. teaches the same negative electrode comprising a carbon material having a d002 between 0.3354-0.3357 nm and a mean particle size of 5-20 um, then inherently the same carbon material having a mean particle circularity of not less than 0.86 must also be obtained.

In addition, the presently claimed property of carbon material having a mean particle circularity of not less than 0.86 would have obviously have been present once the Sakurai et al. product is provided. *In re Best, 195 USPQ 433 (CCPA 1977).*

3. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakurai et al. (JP 2000-195518, translation) in view of Kubota et al. (JP 11-263612).

Sakurai et al. teaches a nonaqueous electrolyte secondary battery comprising a positive electrode, a nonaqueous electrolyte and a negative electrode comprising a carbon material formed of a mixture of a carbon fiber material (A) and a carbonaceous material (B). Sakurai et al. teaches on page 7 of the translation that Examples 12-13 teach 10% of natural graphite and 90% of carbon fiber having1.6 g/cm3. Sakurai et al. teaches on page 3 of translation that the carbonaceous ingredient is carbon powder having a mean particle diameter of 5-30 um and d002 is 0.3354-0.370 nm. Sakurai et al. teaches on page 2 of the translation that the carbon fiber ingredient has an average fiber length of 10-100 um and aspect ratios (a fiber length/diameter of fiber) of 2-10.

Sakurai et al. discloses the claimed invention except for specifically teaching that carbon material has a mean particle circularity of not less than 0.86.

Kubota et al. teaches a method of modifying spherical particles of natural graphite where the sphericity of the particle is greater than 0.86.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the method taught by Kubota et al. to form a graphite having a sphericity of the particles be greater than 0.86 because Kubota et al. teaches that this gives good properties.

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakurai et al. (JP 2000-195518, translation) in view of Hosoya (6,805,996) or Sakurai et al. in view of Kubota et al. and further in view of Hosoya.

Sakurai et al. and Sakurai et al. in view of Kubota discloses the claimed invention as explained above except for specifically teaching that the positive electrode comprising a lithium containing composite oxide of the formula Lia(Co1-x-yMgxMy)bOc.

Hosoya teaches a nonaqueous electrolyte cell comprising a negative electrode comprising a carbonaceous material such as graphite, carbon fibers, etc. and a positive electrode comprising the formula LiCoxAyBzO2 where A can be Al, Mn, etc. and B can be Mg *[claimed invention:* $LiCo_{(1-.05-0.05=0.9)}[Al\ or\ Mn]_{0.05}Mg_{0.05}O_2$*]*. Hosoya teaches that the cell has improved cyclic characteristics at elevated temperatures when the cell contains the positive electrode material.

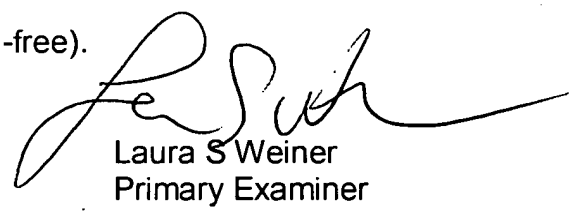
It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the lithium containing composite oxide taught by Hosoya in the battery taught by Sakurai et al. because Hosoya teaches that the cell has improved

cyclic characteristics at elevated temperatures when the cell contains the positive electrode material.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura S. Weiner whose telephone number is 571-272-1294. The examiner can normally be reached on M-F (6:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Laura S Weiner
Primary Examiner
Art Unit 1745

July 20, 2005